IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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	§	Examiner: Christopher Grey
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	§	
For: Link Trunking And Measuring	§	
Link Latency In Fibre Channel	§	Customer No.: 29855
Fabric	§	

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APPEAL BRIEF

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I. REAL PARTY IN INTEREST

Brocade Communications Systems, Inc. is the real party in interest

II. RELATED APPEALS AND INTERFERENCES

None

III. STATUS OF CLAIMS

Claims	Status
1-7	Allowed
8, 9	Cancelled
10-14	Allowed
15-19	Cancelled
20-22	Rejected
23-28	Allowable
29, 30	Cancelled
31-45	Rejected

The appealed claims are 20-22 and 31-45.

IV. STATUS OF AMENDMENTS

None filed

V. SUMMARY OF CLAIMED SUBJECT MATTER

This section provides a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by paragraph and line number and to the drawings by reference characters as required by 37 CFR § 41.37(c)(l)(v). Each element of the claims is identified with a corresponding reference to the specification and drawings where applicable Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element.

Independent claim 20 provides a communication network system, comprising:

at least a first switch (Fig. 3, 302; ¶ 41) and a second switch (Fig. 3, 304; ¶ 41) communicatively coupled together by a plurality of links (Fig. 3, 322, 324, 326, 328; ¶ 41);

a group (Fig. 3, 300; ¶ 41) including selected ones of the links;

a plurality of at least first and second ports, the first ports (Fig. 3, 306, 308, 310, 312; ¶ 41) being coupled to the first switch and the second ports (Fig. 3, 314, 316, 318, 320; ¶ 41) being coupled to second switch, each of the selected ones of the links having a pair of ends coupled to corresponding ones of the first ports and the second ports; and

a pair of transmit and receive ports (¶ 44 for transmit ports, ¶ 46 for receive ports) selected respectively from one of the first ports (¶ 44, Trunk Master) and from one of the second ports (¶ 42), the transmit port routing frames received at the first switch across the group to the second switch (¶ 45).

Independent claim 31 provides in a communication network system having at least a first switch (Fig. 3, 302; ¶ 41) and a second switch (Fig. 3, 304; ¶ 41) communicatively coupled together by a plurality of links (Fig. 3, 322, 324, 326, 328; ¶ 41), the first switch having at least a plurality of first ports (Fig. 3, 306, 308, 310, 312; ¶ 41), and the second switch having at least a plurality of second ports (Fig. 3, 314, 316, 318, 320; ¶ 41), each of the links communicatively coupling one of the first ports to a corresponding one of the second ports, a method for transmitting frames from the first switch to the second switch, the method comprising:

receiving frames for transmission to the second switch at the first switch in order (¶¶ 42, 45);

queuing the received frames for transmission from the first switch to the second switch (¶ 44);

evenly distributing the queued frames between the plurality of first ports (¶ 52); and

transmitting the queued frames from the plurality of first ports to the plurality of second ports so that the frames are received at the plurality of second ports in order as received at the first switch (¶ 51).

Independent claim 35 provides a system for transmitting frames between two network devices, the system comprising:

a first network device (Fig. 3, 302; ¶ 41) having two ports (Fig. 3, 306, 308, 310, 312; ¶ 41);

a second network device (Fig. 3, 304; ¶ 41) having two ports (Fig. 3, 314, 316, 318, 320; ¶ 41); and

two links (Fig. 3, 322, 324, 326, 328; ¶ 41) connecting said two ports of said first network device to said two ports of said second network device, and

wherein said first network device includes:

queuing logic (Fig. 3, 342; ¶ 44) for queuing frames to be transmitted to said second network device;

distribution logic (¶ 52) for evenly distributing the queued frames between said two ports; and

transmitting logic (¶ 52) for transmitting the queued frames from said two ports over said two links so that the frames are received at said two ports of said second network device in order.

Independent claim 39 provides a first network device (Fig. 3, 302; ¶ 41) for connection to a second network device (Fig. 3, 304; ¶ 41), the second network device having two ports (Fig. 3, 314, 316, 318, 320; ¶ 41), with two links (Fig. 3, 322, 324, 326, 328; ¶ 41) connected to the two ports of the second network device, the first network device comprising:

two ports (Fig. 3, 306, 308, 310, 312; ¶ 41) for connection to the two links;

queuing logic (Fig. 3, 342; ¶ 44) for queuing the frames to be transmitted to said second network device;

distribution logic (¶ 52) for evenly distributing the queued frames between said two ports; and

transmitting logic (¶ 52) for transmitting the queued frames from said two ports over said two links so that the frames are received at said two ports of said second network device in order.

Independent claim 42 provides a system for transmitting frames between two network devices, the system comprising:

a host computer (Fig. 2, 122; ¶¶ 35, 36);

a storage unit (Fig. 2, 124, 132; ¶¶ 35, 36);

a first network device (Fig. 3, 302; ¶ 41) having two ports (Fig. 3, 306, 308, 310, 312; ¶ 41) and coupled to said host computer;

a second network device (Fig. 3, 304; ¶ 41) having two ports (Fig. 3, 314, 316, 318, 320; ¶ 41) and coupled to said storage unit; and

two links (Fig. 3, 322, 324, 326, 328; ¶ 41) connecting said two ports of said first network device to said two ports of said second network device, and

wherein said first network device includes:

queuing logic (Fig. 3, 342; ¶ 44) for queuing frames to be transmitted to said second network device;

distribution logic (¶ 52) for evenly distributing the queued frames between said two ports; and

transmitting logic (¶ 52) for transmitting the queued frames from said two ports over said two links so that the frames are received at said two ports of said second network device in order.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 20-22, 31, 35, 39 and 42 stand rejected under 35 U.S.C. § 103 as being unpatentable over Opsasnick, U.S. Patent 6,434,145, in view of Burns, U.S. Patent No. 6,665,295. Claims 32-34, 36-38, 40, 41, 43 and 45 stand rejected under 35 U.S.C. § 103 as being unpatentable over Opsasnick in view of Burns and further in view of Bartow, U.S. Patent No. 5,455,831.

VII. ARGUMENT

The claims do not stand or fall together. Instead, appellants present separate arguments for various independent and dependent claims After a concise discussion of cited art, each of these arguments is separately argued below and presented with separate headings and sub-heading as required by 37 CFR § 41.37(c)(l)(vii).

A. General Comments

Prior to addressing the rejections, a brief review of the system 110 of Opsasnick is considered helpful. Applicants first note that the system 110 is a bridge or gateway between two different networks, ATM and Ethernet in the disclosed embodiment. It is not a switch. Further Applicants note that ports 114 and 118 are on the same unit, the system 110. The port 114 is connected to Ethernet segment 122 through a MAC 140. Port 118 is connected to the ATM network 126 through an ATM switch 144. Thus everything between the two networks 122 and 126 is the system 110 disclosed in Opsasnick. Therefore Opsasnick does not even disclose two interconnected switches. It just discloses the operations of a single bridge between two networks. All of the operations, devices, modules and flows disclosed in Opsasnick thus relate to internal flows between the two external ports of the Opsasnick device.

Applicants provide this preamble to aid in the following remarks, as much of the remarks relate to improper correspondence between claimed elements and items cited in Opsasnick as the Office Action has taken the block diagrams of the single unit of Opsasnick and equated the referred blocks to distinct network elements.

B. § 103 Rejections

Claims 20-22, 31, 35, 39 and 42 were rejected under § 103 over Opsasnick in view of Burns. Claims 32-34, 36-38, 40, 41, 43 and 45 were rejected under 35 U.S.C. § 103 as being unpatentable over Opsasnick in view of Burns and further in view of Bartow. Applicants respectfully traverse the rejections.

a. Claim 20

The Office Action equates the data flows 160 internal to the Opsasnick system to be the plurality of links required in claim 20. It is first submitted that flows are logical items, not physical links between two network switches as required in claim 20. Each of the flows 160I.n or 160E.n in Opsasnick is processed by a processing channel 134.x. The channel 134.x also cannot correspond to the links in a network. This is corroborated as Opsasnick indicates the entire port interface can be a single programmable processor. Thus it could be just one physical item. Therefore Opsasnick does not show the plurality of links coupling the two switches.

Claim 20 next requires a group including selected ones of the links. The Office Action merely generally references again the internal flows 160I.n of Figure 2. The Office Action does not indicate anywhere in Opsasnick where the individual flows are treated as part of group as required by the claim element. Thus a required item is not addressed in the Office Action.

The Office Action next cites Opsasnick column 8, lines 17-28 as equating to the plurality of first and second ports element of claim 20, relying on Burns to substitute an ATM switch for the MAC 140. Applicants note that the first and second ports element of claim 20 further requires: "each of the selected ones of the links having a pair of ends coupled to corresponding ones of the first ports and the second ports." The Office Action does not address this requirement of claim 20; merely indicating there may be a plurality of ports 114 and 118. There is no suggestion in Opsasnick that even the flows 160, which as noted above do not properly correspond to links, could meet this requirement.

Even then, Applicants note that the flows 160 are logical items while the claim requires links having pairs of ends. Applicants submit that as the flows themselves have no substance, they clearly cannot have physical ends. Applicants submit that this portion of the rejection is also improper.

The final element of claim 20 requires a pair of transmit and receive ports selected from one of the first and second ports, the transmit port routing frames received at the first switch across the group to the second switch. The Office Action merely states ports 114 and 118 are capable of forwarding data to further ports and references all of column 4. First, the claim element specifically requires routing the frames from the first switch to the second switch. The Office Action statement about ports 114 and 118 being capable of forwarding to further ports is

inapposite. The claim requires transmission between the two switches, not forwarded to some other point. And, if the argument is not inapposite, then it is fatally flawed as it has the transmit and receive directions totally reversed from all of the other elements defined previously in the Office Action. The reference to column 4 is also inapposite. Column 4 simply defines many of the elements of Figure 1 and describes the flows very generally.

The element specifically requires the transmit port to route frames across the group. The Office Action did not identify any specific element in Opsasnick to correspond, nor could it, not having corresponded anything to the required group. Applicants submit that the circuits 150 and 154 could not properly correspond as they are not part of the port 114 or 118. So the only elements in Opsasnick that might have some routing capability in Opsasnick, assuming arguendo that the flows or channels could be considered to be the required links, which Applicants submit is improper, are not part of the ports, a requirement in the claim. Column 8, lines 17-28, relied on by the Office Action for teaching multiple ports, teaches one block 150 reordering for all the ports 118, thus clearly indicating the circuits 150 and 154 are not part of the ports.

Applicants submit that Opsasnick is improperly applied in the first place, not having the required first and second links, and that numerous further elements are missing when specifics of the various ports on the switches are further defined in the claim. Reversal of the rejection is proper.

b. Claim 21

The Office Action equates the egress port queues 210 to the first queuing logic. Applicants submit this is improper. The claim specifically requires that the queuing logic enables frames to be routed through the transmit port and across the group. Thus the claim requires the order to be queuing logic, transmit port and group. But in Opsasnick the queues 210 are in the block 150 and are between the port 114 and the channels 134 or flows 160I. Thus, even if the channels 134 or flows 160I did correspond to the links, the queues 210 could not allow frames to be routed through the port 114 to the channel 134 as they are after the port 114. This problem is inherent in the correspondence defined by the Office Action as Opsasnick is dealing with internal design and when the claim adds this queuing logic element it cannot be

properly equated to Opsasnick because of the internal versus external error. The rejection is improper and must be withdrawn.

c. Claim 22

Claim 22 is improperly rejected for effectively the same reason as claim 21, namely the queues in Opsasnick cannot be placed in the order required in the claim due to the basic internal versus external correspondence errors made by the Office Action. As a result, the rejection of claim 22 is also improper.

d. Claim 31

The arguments relating to claim 20 generally relate to claim 31 and are not repeated here. Claim 31 further requires "transmitting the queued frames from the plurality of first ports to the plurality of second ports so that the frames are received at the plurality of second ports in order as received at the first switch." The Office Action cites the Abstract, column 4, lines 40-47 and column 4, lines 59-63 in support of the rejection. The Abstract states: "Different frames received on a first port are processed by different processing channels in parallel. The processed frames are transmitted to a second port in the same order in which they were received on the first port." Thus the Abstract only says "transmitted to a second port in the same order they were received on the first port." The claim requires transmitted so that the frames are received at the second port in order as received at the first switch. Thus the Abstract only says transmitted in order to the second port, not that the second port will receive them in the same order as the first port. Thus the Abstract of Opsasnick is no different than Wyatt, a prior reference which has been withdrawn and had been admitted as not teaching this requirement, which had packets transmitted to the destination in the order they were received.

Column 4, lines 40-47 is unrelated upon close review. The claim requires "transmitted . . . so that the frames are received . . . in order." Column 4, lines 40-47 do not discuss being transmitted so that the frames are received in order but instead requires circuits 150 or 154 to perform reordering before delivery to the port because of the differences in the channels 134 and the fact that the frames are provided to the channels in order but may be delayed by the channels. Additionally the circuits 150 and 154 are well after the frames have been transmitted from the

port 114 or 118, the circuits coming after the channel processing, so they cannot form part of a mechanism for transmitting frames so that they are received in order as they are not part of transmitting frames, if the inverted internal analysis of Opsasnick is considered. Again Applicants note that the entire context of column 4, lines 40-47 is improper as it relates to internal flows inside a device, not external transmission over links between devices.

Column 4, lines 59-63 states "circuit 150 orders the frames so that they are transmitted on port 118 in the same order in which they were received on port 114." As in the Abstract, this is only transmitted in order, not transmitted so they are received in order as required by the claim.

Further this sentence in column 4, lines 61-63 and the Abstract evidence the entire inversion of operations done by the Office Action. They relate to receiving in order on port 114 and then transmitting in order on port 118. The Office Action, in its correspondence of the elements has effectively reversed everything from this statement, treating the correspondence between the elements as being transmitted from port 114 to being received on port 118. But this is directly opposed to the entire intent of Opsasnick. If the Office Action chooses to rely on transmission from port 114 through channels 134 or flows 160 to receipt on port 118, then the Abstract, column 4, lines 40-47 and column 4, lines 59-63 cannot provide support because they treat the corresponded items of Opsasnick in exactly the opposite sense and cannot be combined with the remainder of the alleged corresponding items.

Applicants submit the rejection of claim 31 is improper.

e. Claims 35, 39 and 42

As well as having elements in connection with claim 20, as in claim 31 each of these claims similarly requires "transmitting logic for transmitting the queued frames from said two ports over said two links so that the frames are received at said two ports of said second network device in order." As discussed with respect to claim 31, Opsasnick only discloses transmission in order, not reception in order, thus not teaching or suggesting a required claim element, in addition to the other failings of Opsasnick as discussed above.

Applicants submit the rejections of claims 35, 39 and 42 are improper.

f. Claims 32, 36, 40 and 43

These claims require determining skew values for the plurality of links and then transmitting the frames using the determined skew values to control the timing of the transmission of the frames. The Office Action cites Bartow, Abstract; column 3, lines 22-31 and column 14, lines 12-46. Applicants traverse both the combination of the references and the correspondence with Bartow.

The stated reason for the combination does not meet the statutory requirements. It is clearly a hindsight analysis. It merely states that the optical environment of Bartow may be employed within the environment of Opsasnick. First, Applicants dispute this assumption. Opsasnick relates entirely to the operation within a single device. There is no teaching or suggestion that the inter-device optical environment of Bartow is even relevant or applicable to the internal operation of Opsasnick. Second, Opsasnick specifically uses queues in blocks 150 and 154 to handle ordering issues, thus teaching away from solutions such as Bartow. Further, one could not reliably measure skews in Opsasnick. The delays in Opsasnick relate to processing delays in the various channels or flows. These are not repeatable and clearly are not fixed like the skew values determined in Bartow. Thus Opsasnick not only teaches an alternative solution to Bartow, it specifically could not be modified to use Bartow. Third, merely saying something may be employed is not the suggestion of combination required by the statute or KSR. It is a purely hindsight statement. Therefore the combination of the two references is improper.

Further, the Abstract, column 3 and column 14 citations of Bartow do not teach the claim element of using the determined skew values to control timing of the transmission of frames. Bartow does measure skew between the links, but only to select links having a skew below a predetermined limit to be included in the group. See column 6, lines 45-51 where the skew cannot exceed set limits and to ensure that frames are properly identified to a common frame group. Refer also to column 12, line 65 to column 13, line 5, where the slave determines which transceivers are within the maximum skew and thus can be part of the link. The flowchart of Figure 8 further confirms this because any frame exceeding the skew value is treated as a signal error in step 808. Thus the determined skew value is not used to control timing of transmission of frames as required in the claims but rather to select links for the group or to indicate an error if a full set of frames has not been received. Thus Bartow does not teach or suggest a required

limitation, even if improperly combined with Opsasnick, so that claims 32, 36, 40 and 43 are allowable.

Applicants submit the rejections of claims 32, 36, 40 and 43 are improper.

C. Conclusion

For the reasons stated above, Applicants respectfully submit that the rejections should be reversed. Applicants believe that they have complied with each requirement for an appeal brief. If any member of the Board of Appeals has any questions or otherwise feels it would be advantageous, he or she is encouraged to telephone the undersigned at (832) 446-2405.

In the course of the foregoing discussions, Applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. Moreover, it should be understood that there may be other distinctions between the claims and the prior art which have yet to be raised, but which may be raised in the future.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Wong, Cabello, Lutsch, Rutherford & Brucculeri, LLP Deposit Account Number 501922, referencing attorney docket number 112-0030US.

Respectfully submitted,

/Keith Lutsch/

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VIII. CLAIMS APPENDIX

1. (Original) In a communication network system having at least a first switch and a second switch communicatively coupled together by a plurality of links, the first switch having at least a plurality of first ports, and the second switch having at least a plurality of second ports, each of the links communicatively coupling one of the first ports to a corresponding one of the second ports, a method of routing frames received at the first switch to the second switch, the method comprising:

selecting a new port from the first and second ports;

adding the new port to a trunked group in response to determining whether the new port qualifies as a trunking port;

selecting a pair of trunking ports to be trunking master ports; and

responsive to the first switch receiving frames, the trunking master ports selectively controlling the frames routed over the trunked group to the second switch.

2. (Original) The method according to Claim 1, wherein the first ports and the second ports comprise E-Ports.

3. (Original) The method according to Claim 1, wherein selecting a new port from the first and second ports comprises:

sending a request to exchange link parameters associated with the new port;

receiving a response for the request, the response including a first identifier;

determining whether a second identifier exists, the second identifier having a higher value than the first identifier; and

determining whether the link parameters exchanged successfully.

4. (Original) The method according to Claim 3, wherein the first identifier and the second identifier each comprises a World Wide Name.

5. (Original) The method according to Claim 1, wherein determining whether the new port qualifies as a trunking port comprises:

determining a one way skew value for the links associated with the trunked group; and

determining whether the new port can be added to the trunked group based on the one way skew value determined.

6. (Original) The method according to Claim 5, wherein adding the new port to a trunked group comprises:

determining whether the new port is configured as a trunked port;

determining whether a link associated with the new port communicates frames at a speed substantially similar to other links in the trunked group;

verifying that the new port resides on one of the first and second switches; and

determining that the one way skew value is within a predetermined range.

7. (Original) The method according to Claim 5, wherein determining a one way skew value comprises:

measuring a difference in propagation delay between the links associated with the trunked group.

8.-9. (Cancelled)

10. (Original) The method according to Claim 1, wherein selecting a pair of trunking ports to be banking master ports comprises:

determining that the new port does not belong to an existing trunked group; and

designating the new port as a trunking master port.

11. (Original) The method according to Claim 1, wherein the trunking master ports selectively controlling the frames routed over the trunked group to the second switch comprises:

associating one of a plurality of lists with each of the first ports; and

binding one of the lists associated with a trunking master port to a corresponding one of the links in the trunked group for a time period, the time period enabling a frame to be

transmitted from the first switch to the second switch, and received at the second switch with "in order" delivery.

12. (Original) The method according to Claim 1, wherein one of the pair of trunking master ports comprises a transmit port routing the frames over the trunked group.

13. (Previously Presented) The method according to Claim 12, wherein the other of the pair of trunking master ports comprises a receive port queuing frames received over the trunked group.

14. (Previously Presented) The method according to Claim 1, wherein the new port is added to the trunked group prior to performing a Link Reset Protocol during a fabric initialization process.

15.-19. (Cancelled)

20. (Original) A communication network system, comprising:

at least a first switch and a second switch communicatively coupled together by a plurality of links;

a group including selected ones of the links;

a plurality of at least first and second ports, the first ports being coupled to the first switch and the second ports being coupled to second switch, each of the selected ones of the links having a pair of ends coupled to corresponding ones of the first ports and the second ports; and

a pair of transmit and receive ports selected respectively from one of the first ports and from one of the second ports, the transmit port routing frames received at the first switch across the group to the second switch.

21. (Original) The system according to Claim 20, further comprising:

first queuing logic coupled to the transmit port, the first queuing logic enabling frames received at the first ports to be routed through the transmit port and across the group so that the selected ones of the links transmit the frames in an evenly-distributed manner.

22. (Original) The system according to Claim 21, further comprising:

second queuing logic coupled to the receive port, the second queuing logic enabling frames routed across the group to be received at the second switch according to an order of arrival.

23. (Original) The system according to Claim 22, further comprising:

a timer binding a particular list associated with the transmit port to a particular link in the group for a period of time to ensure "in-order" delivery of frames transmitted across the group.

24. (Original) The system according to Claim 23, wherein the timer comprises:

a programmable timeout constant register.

25. (Original) The system according to Claim 23, wherein the first ports and the second ports comprise E-Ports.

26. (Original) The system according to Claim 23, wherein the links comprise ISLs.

27. (Original) The system according to Claim 23, further comprising a one way link timer.

28. (Original) The system according to Claim 23, further comprising:

a Fibre Channel fabric, the first switch and the second switch forming a part of the fabric.

29.-30. (Cancelled)

31. (Previously Presented) In a communication network system having at least a first switch and a second switch communicatively coupled together by a plurality of links, the first switch having at least a plurality of first ports, and the second switch having at least a plurality of second ports, each of the links communicatively coupling one of the first ports to a corresponding one of the second ports, a method for transmitting frames from the first switch to the second switch, the method comprising:

receiving frames for transmission to the second switch at the first switch in order;

queuing the received frames for transmission from the first switch to the second switch;

evenly distributing the queued frames between the plurality of first ports; and

transmitting the queued frames from the plurality of first ports to the plurality of second ports so that the frames are received at the plurality of second ports in order as received at the first switch.

32. (Previously Presented) The method of claim 31, further comprising:

determining skew values for the plurality of links, and

wherein said transmitting of frames uses the determined skew values to control timing of the transmission of the frames.

33. (Previously Presented) The method of claim 32, wherein the skew values are one way skew values.

34. (Previously Presented) The method of claim 32, wherein the first and second switches are Fibre Channel switches and the plurality of links are Fibre Channel links.

35. (Previously Presented) A system for transmitting frames between two network devices, the system comprising:

a first network device having two ports;

a second network device having two ports; and

two links connecting said two ports of said first network device to said two ports of said second network device, and

wherein said first network device includes:

queuing logic for queuing frames to be transmitted to said second network device;

distribution logic for evenly distributing the queued frames between said two ports; and

transmitting logic for transmitting the queued frames from said two ports over said two links so that the frames are received at said two ports of said second network device in order.

36. (Previously Presented) The system of claim 35, wherein said first and second network devices include:

cooperating logic to determine the skew value between said two links, and

wherein said transmitting logic uses said skew value to control timing of the transmission of the frames.

37. (Previously Presented) The system of claim 36, wherein the skew value is a one way skew value.

38. (Previously Presented) The system of claim 36, wherein said first and second network devices are Fibre Channel devices and wherein said two links are Fibre Channel links.

39. (Previously Presented) A first network device for connection to a second network device, the second network device having two ports, with two links connected to the two ports of the second network device, the first network device comprising:

two ports for connection to the two links;

queuing logic for queuing the frames to be transmitted to said second network device;

distribution logic for evenly distributing the queued frames between said two ports; and

transmitting logic for transmitting the queued frames from said two ports over said two links so that the frames are received at said two ports of said second network device in order.

40. (Previously Presented) The first network device of claim 39, further comprising:

skew logic to cooperate with the second network device to determine the skew value between the two links, and

wherein said transmitting logic uses said skew value to control timing of the transmission of the frames.

41. (Previously Presented) The first network device of claim 39, wherein the first network device is a Fibre Channel device.

42. (Previously Presented) A system for transmitting frames between two network devices, the system comprising:

a host computer;

a storage unit;

a first network device having two ports and coupled to said host computer;

a second network device having two ports and coupled to said storage unit; and

two links connecting said two ports of said first network device to said two ports of said second network device, and

wherein said first network device includes:

queuing logic for queuing frames to be transmitted to said second network device;

distribution logic for evenly distributing the queued frames between said two ports; and

transmitting logic for transmitting the queued frames from said two ports over said two links so that the frames are received at said two ports of said second network device in order.

43. (Previously Presented) The system of claim 35, wherein said first and second network devices include:

cooperating logic to determine the skew value between said two links, and

wherein said transmitting logic uses said skew value to control timing of the transmission of the frames.

44. (Previously Presented) The system of claim 36, wherein the skew value is a one way skew value.

45. (Previously Presented) The system of claim 36, wherein said first and second network devices are Fibre Channel devices and wherein said two links are Fibre Channel links.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.